

ICAR-Central Research Institute for Dryland Agriculture
Hyderabad

Status of monsoon and agromet advisories/ contingency plans for some deficit/excess
rainfall areas

Southwest monsoon was vigorous over Rajasthan, Jharkhand, Vidarbha and Gangetic West Bengal during last week. Kerala, North interior Karnataka, Telangana, Gujarat, Western UP, Delhi, Chandigarh and Punjab received 'scanty' rainfall during 30 July - 5 August. During 1 June -9 Aug 2015, the country as a whole received 489 mm rainfall, which is 9% less than the normal (535 mm). The region-wise Southwest Monsoon rainfall status is: East and Northeast India (11% deficit), Northwest India (3% excess), Central India (8% deficit) and South peninsula (22% deficit). Out of 36 meteorological sub divisions in the country, 16 are facing deficit rainfall condition; 15 are under normal rainfall condition and 5 are with excess rainfall condition. Districts which received rainfall less than 50% of normal during 1 June to 9 August were identified and depicted in figure 1. The following is the amount of rainfall received during June 1 - 9 August and contingency measures that are to be followed for the crops/cropping systems in the states mentioned.

A) Deficit rainfall areas

1. Kerala

Rainfall situation: the state has received 31% deficit rainfall so far (from 1 June to 9 August).

Progress in sowing: the total area sown during *kharif* season in different districts of Kerala is as follows. Thiruvananthapuram: 886.2 ha, Kollam: 480 ha, Pathanamthitta :54.952 ha, Kottayam: 1600 ha. Thrissur: 1366.9 ha, Palakkad: 39000 ha, Kannur: 2950 ha, Kasargode: 2000 ha.

Agromet advisories

- Paddy: the light rains and high humidity are favorable for the blast disease. The symptoms appear on the stem on one or two nodes just below the panicle as grayish black or dark lesions. To control this apply Carbendazim (Bavistin) 1gm/litre.
- Rubber: intermittent rainfall can cause the incidence of pink disease, which can be controlled by chiseling out the affected bark and apply Bordeaux paste.

2. Karnataka

South Karnataka

Rainfall situation: North interior Karnataka received 45% deficit rainfall, while coastal Karnataka and south interior Karnataka received 25% and 9% deficit rainfall, respectively.

Progress in sowing: out of the targeted sowing area, 46% of cereals, 56% of pulses, 59% of oilseeds have already been sown. Out of the total targeted area of 73 lakh hectare, 40.81 lakh hectare has been covered (56 %).

Following are the recommendations

- Finger millet : GPU-26, 45 48(till August 2nd week).
- Maize – Deccan-103, Vijaya composite and Ganga-11
- Sunflower: Modern, KBSH-1, KBSH-41, KBSH-42, KBSH-44 and KBSH-53.
- Cowpea: C-152, KM-5and PKB-4 (vegetable purpose)

North Interior Karnataka (NIK)

The total area sown in North Interior Karnataka is accounts for 74% of the normal sowing area till 4 August. Only upto 50% of the Normal area has been covered in Bellary, Raichur, Gulbarga, Bijapur and Yadgir districts whereas 70% to 80% of the Normal area has been covered in Koppal, Bagalkot and Uttar Kannada districts.

Contingency measures for NIK

Due to the severe drought conditions caused by deficient/scanty rainfall in North Interior Karnataka, the following interventions are recommended:

There is no scope for taking up any sowing operation in view of rainfall forecast of poor rainfall

- Thinning operation by removal of weak seedlings in each row
- Spraying of 0.5 per cent KNO₃
- Repeated inter-cultivation
- Keep the crops free from weeds
- Open conservation furrow after two rows in wider spaced crops and after every 8th row in narrow spaced crops

3. Maharashtra

Rainfall situation: Marathwada is facing 52% deficit rainfall; Konkan & Goa and Madhya Maharashtra - 28% deficit; Vidarbha - 11% deficit.

Progress in sowing: 83% of normal kharif sown area is covered in the state as a whole under all the crops as on 8 August. Sugar crops (42%) and cereals (58%) are the least sown crops so far.

Crop contingency measures

Marathwada

- Undertake light hoeing or mulching with crop residue to conserve soil moisture in long duration crop like cotton.
- Apply protective irrigation (drip or sprinkler method) to crops like soybean, cotton and sorghum in view of prevailing moisture stress condition.
- Continue weeding in black gram, cotton, soybean and red gram.

Madhya Maharashtra

- It is recommended to apply 20-25 kg N/ha to take advantage of coming rains.
- Protective irrigation if available – use sprinkler/drip irrigation methods to save available water

- Hoeing is recommended to conserve soil moisture and remove weeds which utilizes soil moisture for main crop growth.
- Maintain optimum plant population.
- Organic mulching with crop residues in case of newly plant orchards.

Vidarbha

- Unsown areas can still be accommodated with adopting suitable crops/crop varieties (as mentioned below) till August 15.
 - ✓ Pigeonpea (AKT 8811, Vipula, PKV- Tara and BSMR-736 with closer 60x20 cm spacing).
 - ✓ Alternative crops include pearl millet (PKV Raj Shradha, Saburi), sesame (AKT64), sunflower(PKV SF-9, PKVSH-27, KBSH-1) and castor (AKC-1, GCH-4,5,6 & DCH-117).
 - ✓ Intercropping system include pearl millet + pigeon pea (2:1,.4:2) or sunflower + pigeon pea (2:1)
- Provide proper/immediate drainage measures in waterlogged crop fields and orchards.
- Priority should be given for *in situ/ex situ* rainwater harvesting during the remainder of the season.

4. Andhra Pradesh

Rainfall situation: while Coastal Andhra Pradesh has received 8% surplus rainfall so far, Rayalaseema region is facing 35% deficit rainfall condition.

Progress in sowing: The total area sown in the state of Andhra Pradesh accounts for 40% of the normal kharif season area as on 29 July.

Contingency Crop plan for Andhra Pradesh

- Due to lack of sufficient rains already sown rainfed crops are suffering from moisture stress in Rayalaseema districts and area sown under various crops is less than 40% of the season normal due to deficit rainfall.
- In all the districts farmers are advised to provide protective irrigation if water is available in farm ponds or bore wells to avoid moisture stress in early sown groundnut, pearl millet, cotton, castor, pigeon pea and sorghum.
- Take up intercultivation for weed control and moisture conservation.
- Foliar spray of 2% urea or potassium nitrate to overcome moisture stress.
- **Ananthapur and Kurnool districts:** In rainfed light soils, farmers can go for sowing of sorghum, pearl millet, pigeon pea, horse gram, castor, cowpea, cluster bean, field bean in the month of August. In rainfed heavy soils, castor, cotton, chilli can be taken up up to end of August.
- **Chittoor, Nellore and Kadapa districts:** Farmers can go for sowing of pigeon pea, sorghum, black gram, green gram, castor, cowpea, field bean and sunflower up to end of

August in rainfed light soils and Horse gram, Pillipesara and Sunnhemp in rainfed heavy soils.

- **Prakasam district** rainfed light soils, after receipt of sufficient rainfall in August month farmers can go for pigeon pea, castor and pearl millet crops. In rainfed heavy soils they can go for sowing of cotton, castor, pigeon pea, sunflower and chilli.

Uttar Pradesh

Rainfall situation: Eastern UP has received 36% deficit rainfall and Western UP has received 25% deficit rainfall so far.

Progress in *kharif* sowing: The total area sown in the state of Uttar Pradesh is 89.42 lakh ha (As on 5 August 2015) and this accounts for 93.96% of the normal *kharif* season area.

Contingency Crop plan for Central part of Uttar Pradesh

Due to deficit rainfall in the region, following measures are recommended

- Spray 2% Urea to protect from drought condition.
- Undertake light hoeing, mulch with crop residue to conserve soil moisture.
- Undertake weeding and thinning in green gram, black gram and Pigeon pea.
- Due to humid and warm weather in Kanpur region, infestation of Bacterial blight in rice crops is likely to increase; spray Mancozeb @ 25 g per 10 liters of water. Also for control of Leaf folder and Stem borer pest; spray Thiomethoxan @ 4 g per 10 liters of water or Qunalphas 1.5% solution.
- Undertake gap filling to maintain plant population of rice during this week.

Note: The above is a general overview for the states. However, ICAR (CRIDA) has prepared district level contingency plans (covering all farming situations within the district) and placed in the websites of the Ministry of Agriculture & Cooperation, Government of India (www.agricoop.nic.in) and CRIDA (www.crida.in) for further details.

- The following map was generated by AICRPAM, CRIDA (with the data provided by IMD), Hyderabad to identify the districts experiencing more than 50% deficit condition.

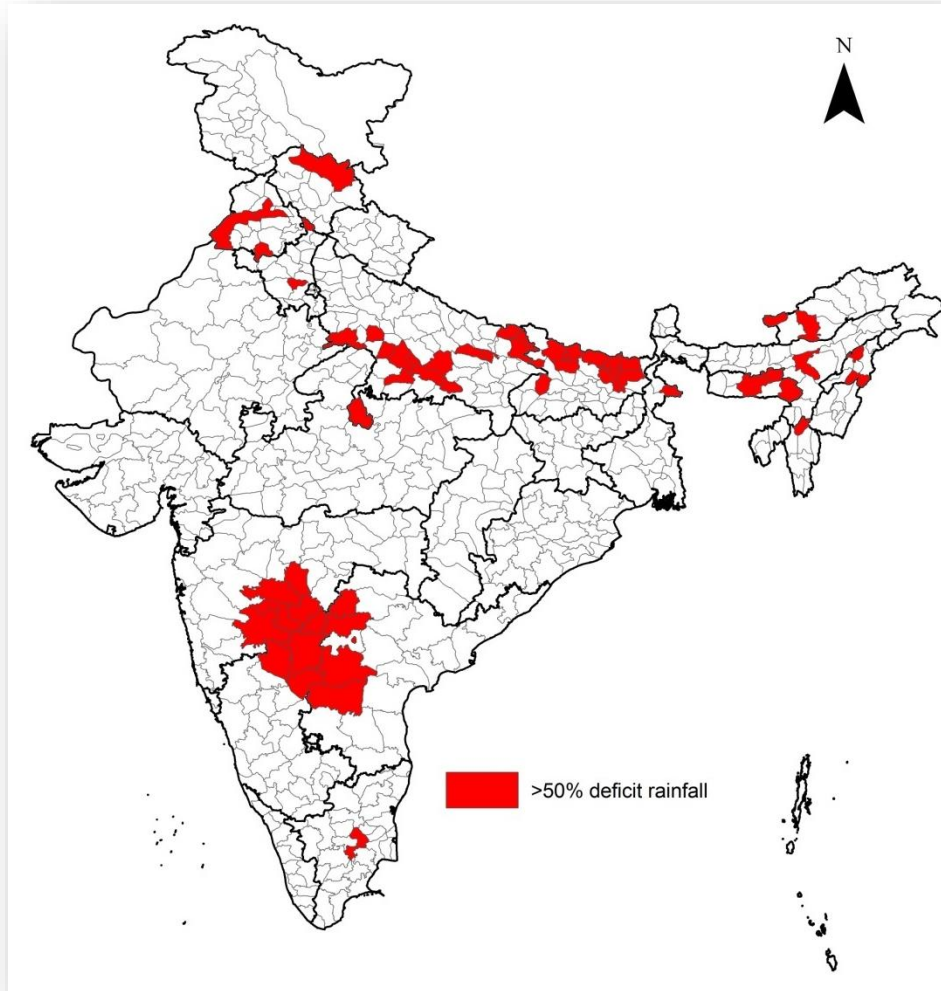


Figure 1: Districts (58) experiencing more than 50% rainfall deficit (From 1 June - 9 August, 2015)

Table 1. Details of the districts experiencing more than 50% rainfall deficit from 01 June to 9 August 2015

S.No.	MET. SUBDIVISION	DISTRICT	Period:01-06-2015 To 09-08-2015			
			ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
1.	Arunachal Pradesh	East Kameng	206.4	779.7	-74%	S
2.		Tawang	625.0	1575.5	-60%	S
3.	Assam	Nagaon	303.0	697.1	-56%	D
4.	Meghalaya	Jaintia Hills	1151.0	3159.8	-64%	S
5.		Ri Bhoi	414.1	870.6	-52%	D
6.		West Khasi Hills	821.0	1871.9	-56%	D
7.	Nagaland	Mokokchung	247.0	1199.1	-79%	S
8.		Phek	135.0	777.4	-83%	S
9.	Mizoram	Kolasib	268.0	1002.7	-73%	S
10.	West Bengal	Dakshin Dinajpur	315.9	719.2	-56%	D
11.	Bihar	Arariya	365.1	817.1	-55%	D
12.		Bhojpur	239.5	521.9	-54%	D
13.		Madhepura	296.4	677.8	-56%	D
14.		Madubani	224.7	629.8	-64%	S
15.		Muzaffarpur	234.0	566.1	-59%	D
16.		Purba Champaran	239.0	595.6	-60%	S
17.		Purnia	274.4	778.3	-65%	S
18.		Saharsa	319.9	858.9	-63%	S
19.		Sheohar	232.6	672.2	-65%	S
20.		Sitamarhi	152.1	672.2	-77%	S
21.		Siwan	237.9	554.3	-57%	D
22.		Supaul	299.5	639.4	-53%	D
23.		Uttar Pradesh	Ambedkarnagar	71.0	511.8	-86%
24.	Deoria		243.3	524.8	-54%	D
25.	Faizabad		266.7	568.0	-53%	D
26.	Fatehpur		76.6	432.5	-82%	S
27.	Kanpur		146.4	366.2	-60%	S
28.	Kanpur Dehat		124.7	399.3	-69%	S
29.	Kaushambi		93.8	410.6	-77%	S
30.	Kushinagar		171.1	647.8	-74%	S
31.	Maharajganj		269.9	706.7	-62%	S
32.	Raibareli		152.6	402.1	-62%	S
33.	Agra		102.6	370.4	-72%	S
34.	Auraiya		167.3	372.0	-55%	D
35.	Hamirpur		204.5	420.4	-51%	D
36.	Lalitpur		256.3	532.5	-52%	D
37.	Mainpuri		169.8	347.8	-51%	D
38.	Haryana	Panchkula	261.0	550.0	-52%	D
39.		Rohtak	141.4	305.7	-54%	D
40.	Punjab	Firozpur	83.3	210.4	-60%	S
41.		Jalandhar	113.1	320.0	-65%	S
42.		Mansa	83.9	187.1	-55%	D
43.	Himachal Pradesh	Lahul&Spiti	83.6	261.2	-68%	S
44.						
45.	Maharashtra	Solapur	104.5	230.1	-54%	D

S.No.	MET. SUBDIVISION	DISTRICT	Period:01-06-2015 To 09-08-2015			
			ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
46.		Bid	101.6	297.2	-66%	S
47.		Latur	131.0	423.2	-69%	S
48.		Osmanabad	110.5	325.9	-66%	S
49.		Parbhani	149.2	425.5	-65%	S
50.	Andhra Pradesh	Hyderabad	163.7	341.4	-52%	D
51.		Mahabubnagar	126.9	296.3	-57%	D
52.		Medak	154.6	430.6	-64%	S
53.		Nizamabad	231.5	534.9	-57%	D
54.		Kurnool	102.9	228.2	-55%	D
55.	Tamil Nadu	Tiruchirappalli	47.1	98.2	-52%	D
56.	Karnataka	Bidar	183.0	380.5	-52%	D
57.		Bijapur	74.6	209.3	-64%	S
58.		Gulbarga	149.3	312.7	-52%	D
59.		Raichur	77.0	226.1	-66%	S